ALEXA
XR Module Workflows

WHITE PAPER

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codex

Introduction

Most of the big Hollywood features that were shot in ARRIRAW were recorded on Codex recorders. The technology used by Codex, its reliability, smooth workflow and their reputation led us to engage in a close partnership, to create a more powerful integrated recording module for the ALEXA. The fruit of this collaboration is the ALEXA XR Module which, for the first time, allows uncompressed in-camera ARRIRAW recording. This not only makes for a smaller and lighter ARRIRAW camera package, it also simplifies setup and operation and enables a faster, more reliable and more versatile workflow on set.

This document provides an introduction to the workflows related to the ALEXA XR Module.

Changes

This is a revision of the first ALEXA XR Module Workflows white papers that were published on March 6 and 27. The first revision contained changes to the Capture Drive Format Overview and some performance test results for the three example workflows. This revision adds a paragraph about metadata in the camera setup and corrects some information for the single dock setup.

Table of Contents

Introduction **2**
Changes **2**
Table of Contents **2**
The XR Module **3**
The XR Capture Drive **3**
SxS Camera Adapter for SxS PRO Cards **3**
ARRIRAW T-Link Output **3**
Recording Format Overview 4
Camera Setup **5**
Production Metadata 5
Media Access **5**
Uncompressed ARRIRAW Recording 5
The Codex Virtual File System (VFS) 5
The Codex Platform 7
Compressed ProRes or DNxHD Recording 7
Building your ARRIRAW Deliverables Workflow **7**
Single Dock Setup 8
Dual Dock Setup 9
Codex Vault 10
Accessing UDF Volumes (XR Capture Drives and SxS PRO cards) 11
Scaling your Workflow **11**
More Information **11**

The XR Module

All ALEXA XT cameras come with the XR Module, which was co-developed with Codex. The XR Module is a camera side panel that replaces the popular SxS Module and thereby completes the selection of formats that are available for in camera recording. Also being available as an upgrade for all classic ALEXA cameras, the XR Module is another manifestation of the modular upgradeability that ARRI built into the ALEXA design from the very beginning.

The XR Module allows in-camera ARRIRAW, ProRes, and DNxHD[1] recording up to 120 fps onto the exceptionally fast XR Capture Drives. Removing the need for the external recorder makes shooting ARRIRAW easier and faster than ever before. The camera package becomes more compact, solid, and lighter. There are no more cables to worry about and less configuration that needs to be done. ProRes and DNxHD[1] recording on XR Capture Drives provides significantly longer recording times, while it is also possible to continue using SxS PRO cards in the XR Module, with an SxS adapter from ARRI.

The XR Capture Drive

Capturing 120 fps of uncompressed ARRIRAW data requires a throughput of almost 850 MB per second. Clearly, this calls for something much faster than SxS PRO cards. The XR Capture Drives by Codex are equipped with highly reliable solid-state drive technology in a small and rugged aluminum housing. They share the same mechanical interface as the Codex Onboard S Capture Drives (60 fps max) and Transfer Drives (2x capacity, not for recording) and can be accessed using the standard Codex docking stations[2].

As with SxS PRO cards, you can record different frame rates, codecs, resolutions, or aspect ratios[3] on the same Capture Drive. The ALEXA formats the drives with different file systems for ARRIRAW recording and compressed recording. Therefore, compressed ProRes or DNxHD clips and uncompressed ARRIRAW footage cannot be recorded on the same drive.

SxS Camera Adapter for SxS PRO Cards

With the optional SxS Adapter, it is also possible to keep using SxS PRO cards for ProRes and DNxHD recording in the modes that were available from the SxS module, except for simultaneous output to two cards (dual recording).

ARRIRAW T-Link Output

ALEXA XT cameras and cameras that are updated with an XR Module will no longer output ARRIRAW via T-Link. The Codex Platform can generate other file formats directly from the ARRIRAW data on a Capture Drive (see Media Access below). Parallel recording of an editing proxy in addition to ARRIRAW data therefore has become redundant. ALEXA cameras with an SxS Module continue to offer T-Link output.

[1] DNxHD recording is temporarily unavailable on cameras with an XR Module (ALEXA XT or upgrades from classic models). Cameras with an SxS Module and cameras with an XR Module are running on two different software branches. Classic cameras running ALEXA SUP 7.0.2 therefore are not affected.

[2] ARRI has not validated the Codex Onboard S Capture Drives for use in ALEXA XR upgraded or ALEXA XT cameras, but the OBS Capture Drives have been tested by Codex.

[3] To record and play back footage in 4:3 or 16:9 aspect ratio, the camera needs to be switched to the according sensor mode.

Recording Format Overview

XR Capture Drive

Format	Aspect Ratio	fps Range[1]	Output Pixels	File Size per Frame[2]	Data Rate[2] @ 24 fps	Data Volume[2] @ 24 fps	Rec Time @ 24 fps	Rec Time @ max fps
ARRIRAW 2.8K	4:3	0.75 – 48	2880 x 2160	9.33 MB	1.79 Gbit/s	806 GB/h	35 min	17 min
ARRIRAW 2.8K	16:9	0.75 – 120	2880 x 1620	7.00 MB	1.34 Gbit/s	605 GB/h	47 min	9 min
ProRes 4444 2K	4:3	0.75 – 48	2048 x 1536	2.19 MB	425 Mbit/s	195 GB/h	70 min	35 min
ProRes 4444 2K	16:9	0.75 – 60	2048 x 1152	1.66 MB	320 Mbit/s	146 GB/h	93 min	37 min
ProRes 4444 HD[2]	16:9	0.75 – 60	1920 x 1080	1.44 MB	280 Mbit/s	128 GB/h	107 min	21 min
ProRes 422 (HQ) 2K	4:3	0.75 – 48	2048 x 1536	1.44 MB	280 Mbit/s	130 GB/h	105 min	52 min
ProRes 422 (HQ) 2K	16:9	0.75 – 60	2048 x 1152	1.09 MB	210 Mbit/s	98 GB/h	140 min	56 min
ProRes 422 (HQ) HD	16:9	0.75 – 120	1920 x 1080	0.95 MB	185 Mbit/s	85 GB/h	160 min	32 min
ProRes 422 2K	4:3	0.75 – 48	2048 x 1536	0.96 MB	190 Mbit/s	87 GB/h	158 min	31 min
ProRes 422 2K	16:9	0.75 – 60	2048 x 1152	0.72 MB	140 Mbit/s	65 GB/h	211 min	42 min
ProRes 422 HD	16:9	0.75 – 120	1920 x 1080	0.63 MB	125 Mbit/s	57 GB/h	241 min	48 min
ProRes 422 (LT) 2K	4:3	0.75 – 48	2048 x 1536	0.66 MB	130 Mbit/s	63 GB/h	228 min	45 min
ProRes 422 (LT) 2K	16:9	0.75 – 60	2048 x 1152	0.49 MB	100 Mbit/s	45 GB/h	305 min	61 min
ProRes 422 (LT) HD	16:9	0.75 – 120	1920 x 1080	0.44 MB	90 Mbit/s	40 GB/h	347 min	69 min
ProRes 422 (Proxy) 2K	4:3	0.75 – 48	2048 x 1536	0.29 MB	60 Mbit/s	27 GB/h	513 min	102 min
ProRes 422 (Proxy) 2K	16:9	0.75 – 60	2048 x 1152	0.22 MB	45 Mbit/s	20 GB/h	687 min	137 min
ProRes 422 (Proxy) HD	16:9	0.75 – 120	1920 x 1080	0.19 MB	40 Mbit/s	18 GB/h	780 min	156 min
DNxHD 444[3]	16:9	0.75 – 60	1920 x 1080	1.83 MB	350 Mbit/s	159 GB/h	85 min	34 min
DNxHD 175x/185x/220x[3]	16:9	0.75 – 120	1920 x 1080	0.91 MB	175 Mbit/s	79 GB/h	170 min	34 min
DNxHD 115/120/145[3]	16:9	0.75 – 120	1920 x 1080	0.60 MB	115 Mbit/s	52 GB/h	255 min	51 min

[1] The fps range is divided into regular speed (0.75 – 60 fps) and high speed (60 – 120 fps) mode. Switching modes requires a reboot.
[2] ProRes is a variable bit rate codec. The actual file size, data rate and resulting storage requirements vary with the image content.
[3] DNxHD recording is temporarily unavailable on cameras with an XR Module. DNxHD 444 is planned for a future software update.

	32 GB SxS PRO			**64 GB SxS PRO**		
Format	**fps Range[1]**	**Recording Time @24 fps**	**Recording Time @ max fps**	**fps Range[1]**	**Recording Time @ 24 fps**	**Recording Time @ max fps**
4:3 ARRIRAW 2.8K	–	–	–	–	–	–
16:9 ARRIRAW 2.8K	–	–	–	–	–	–
4:3 ProRes 4444 2K[2]	0.75 – 30	9 min	7 min	0.75 – 48	19 min	9 min
16:9 ProRes 4444 2K[2]	0.75 – 40	12 min	7 min	0.75 – 60	25 min	10 min
16:9 ProRes 4444 HD[2]	0.75 – 40	14 min	8 min	0.75 – 60	29 min	11 min
4:3 ProRes 422 HQ 2K[2]	0.75 – 40	14 min	8 min	0.75 – 48	28 min	14 min
16:9 ProRes 422 HQ 2K[2]	0.75 – 60	19 min	7 min	0.75 – 60	38 min	15 min
16:9 ProRes 422 HQ HD[2]	0.75 – 60	21 min	8 min	0.75 – 120	43 min	8 min
4:3 ProRes 422 2K[2]	0.75 – 48	21 min	10 min	0.75 – 48	43 min	21 min
16:9 ProRes 422 2K[2]	0.75 – 60	28 min	11 min	0.75 – 60	57 min	11 min
16:9 ProRes 422 HD[2]	0.75 – 60	32 min	13 min	0.75 – 120	65 min	13 min
4:3 ProRes 422 (LT) 2K[2]	0.75 – 48	30 min	15 min	0.75 – 48	61 min	31 min
16:9 ProRes 422 (LT) 2K[2]	0.75 – 60	41 min	16 min	0.75 – 60	82 min	16 min
16:9 ProRes 422 (LT) HD[2]	0.75 – 60	46 min	18 min	0.75 – 120	93 min	18 min
4:3 ProRes 422 (Proxy) 2K[2]	0.75 – 48	68 min	34 min	0.75 – 48	139 min	69 min
16:9 ProRes 422 (Proxy) 2K[2]	0.75 – 60	92 min	36 min	0.75 – 60	186 min	36 min
16:9 ProRes 422 (Proxy) HD[2]	0.75 – 60	104 min	41 min	0.75 – 120	211 min	41 min
16:9 DNxHD 444[3]	0.75 – 60	12 min	5 min	0.75 – 60	24 min	9 min
16:9 DNxHD 175x/185x/220x[3]	0.75 – 60	24 min	9 min	0.75 – 120	48 min	9 min
16:9 DNxHD 115/120/145[3]	0.75 – 60	36 min	14 min	0.75 – 120	72 min	14 min

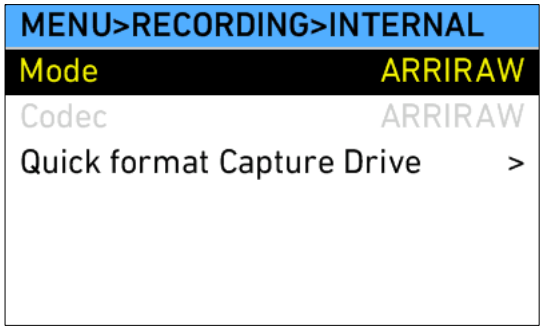
[1] The fps range is divided into regular speed (0.75 – 60 fps) and high speed (60 – 120 fps) mode. Switching modes requires a reboot.
[2] ProRes is a variable bit rate codec. The actual file size, data rate and resulting storage requirements vary with the image content.
[3] DNxHD recording is temporarily unavailable on cameras with an XR Module. DNxHD 444 is planned for a future software update.

Camera Setup

Without an external device to mount and no extra cables to run, rigging the camera for an ARRIRAW shoot takes no longer than setting up the recording for SxS cards. It is that simple.

With an integrated XR module, all settings need to be configured only once, and some settings are completely gone, as they were automated or became redundant. As a matter of fact, all you need to do is set the internal recording mode to ARRIRAW, load an XR Capture Drive and be ready to shoot.

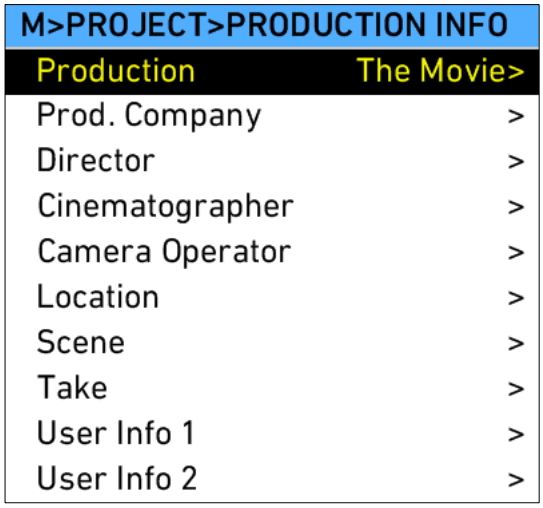
Of course, you also need to set up time code, ASA rating, white balance and so on, but that also goes for recording ProRes. Changing frame rates or switching between 16:9 and 4:3, however, does not require a trip into the recorder's menus, which is a great time saver.



ARRIRAW recording is configured under 'MENU > RECORDING > INTERNAL', which was named 'SxS Cards' previous to SUP 8.0. The menu controls if the camera records uncompressed ARRIRAW, or a compressed format like ProRes (later also DNxHD) on the XR module. ProRes or DNxHD files can be recorded on Capture Drives or SxS PRO cards with an SxS adapter.

Production Metadata

The camera offers a small set of general production metadata. This data is usually needed, or at least very helpful, when the recorded footage will be organized by the editors. Rather than making the data wrangler add this information for every take, when the footage is transferred from the capture drive, the camera can automatically do that for him, once the meta data has been entered.



The most important information is:

MENU > Project > Camera index

MENU > Project > Production info > Production

MENU > System > System time + date

Entering all production info can be somewhat time-consuming. When more than one ALEXA is used for the shoot, you can copy the info from one camera to another with a user setup on an SD card under
MENU > User setups > Save/Load current setup.

Media Access

Depending on the recording mode of the XR Module – uncompressed ARRIRAW or compressed ProRes/DNxHD – a capture drive is formatted with different file systems.

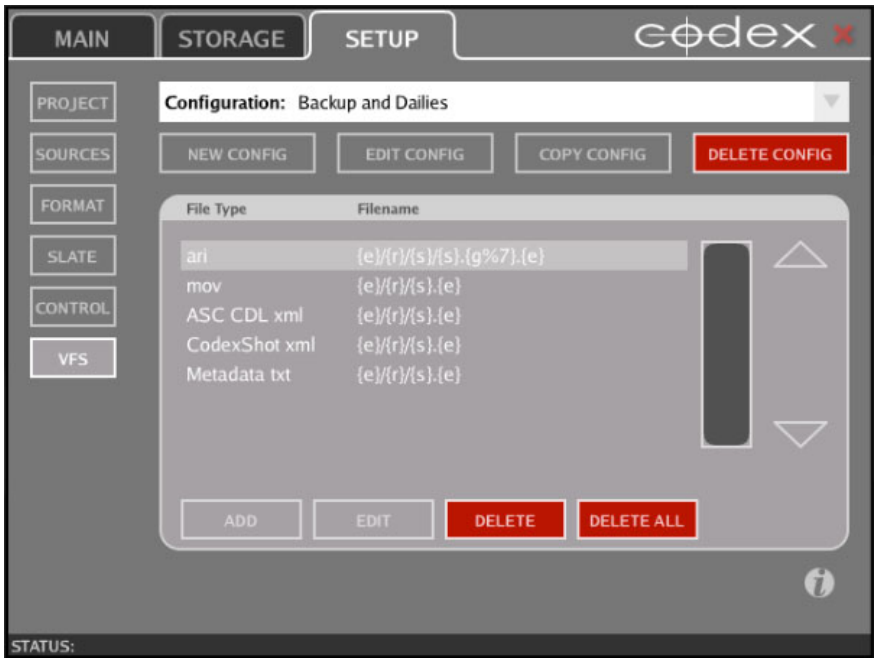
Uncompressed ARRIRAW Recording

When the XR Module is set to uncompressed ARRIRAW recording, an XR Capture Drive is initialized as a Codex volume, which offers 455 GB of storage space. This allows for 47 minutes of 16:9 ARRIRAW recording at 24fps or 9 minutes of ARRIRAW at 120fps.

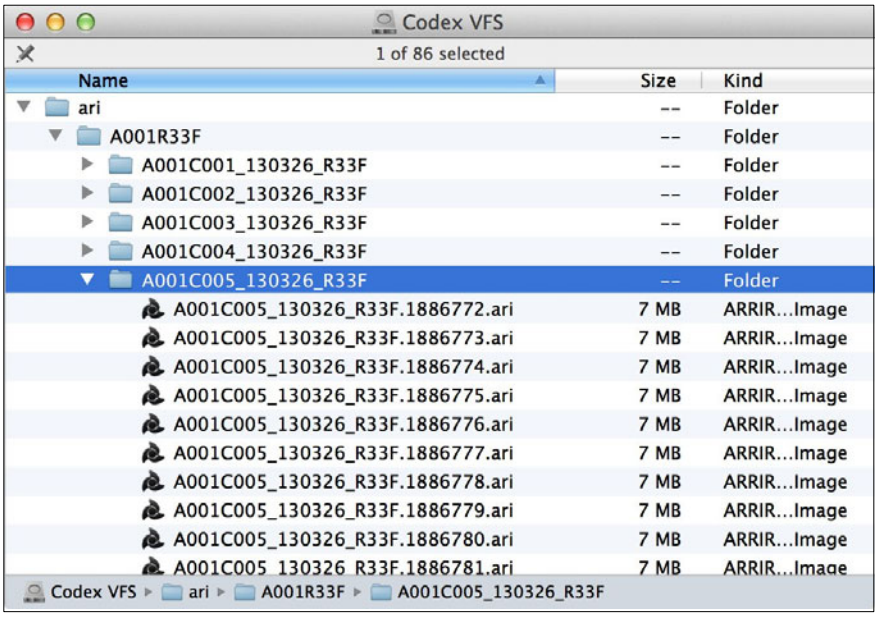
The Codex Virtual File System (VFS)

When a Capture Drive with ARRIRAW footage is loaded on a computer, it shows up like a regular external drive. Operating underneath, however, is the Codex Virtual File System (VFS). The VFS can present, for example, readily processed DPX files, MXF/DNxHD and/or QuickTime/ProRes proxies next to the original ARI files on the Codex volume. Except for the recorded data on the drive, none of these additional files actually exist. It's only when these files are requested, that they are generated, on-demand, and on the fly. Hence the term "virtual".

The file formats, file naming and directory structure that will be presented by the VFS are fully configurable through the Codex Platform software. This makes the VFS a highly flexible tool for providing exactly the material you require, when you want it, without redundant processing and storage overhead on your drives.

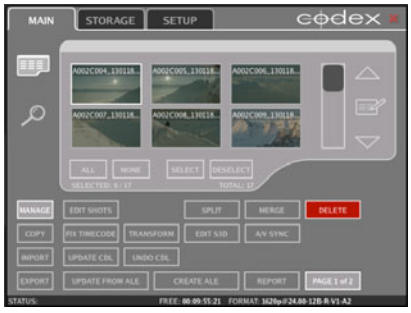


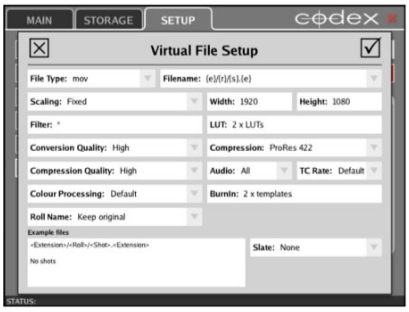
The default VFS configuration for the output of only ARRIRAW files uses the following file path:
<Extension>/<Roll>/<Shot>/<Shot>.<TC Frames>.<Extension>



The Codex Platform

You could call it Codex's universal remote control. The Codex Platform software is used to operate recorders or their docks, manage recorded footage and metadata, select, add or edit the VFS configuration, and to manage capture drives and mass storage.





Codex offers a number of documents, ranging from quick overviews to detailed operation instructions. Three documents that will give you a good overview of the basic software functions are the Main Tab Guide, the Storage Tab Guide and the VFS (Virtual File System) Guide. This and more information is available at http://www.codexdigital.com/support/media-stations.

Once you understand the main concept, you can proceed with other in-depth guides covering the whole setup. To see what the Codex file workflow looks like in an ARRIRAW production, you should read "**Processing ARRIRAW with the Codex Transfer Station**".

Compressed ProRes or DNxHD Recording

When an ALEXA is set to record ProRes 2K/HD or DNxHD, an XR drive is initialized as a UDF volume, which offers 229 GB of storage space. This equals over 100 minutes of 16:9 ProRes 4444 in 2K or three hours of ProRes 422 HQ at 24 fps[1]. Using the UDF file system on XR Capture Drives as well as on SxS PRO cards maintains compatibility to the established ALEXA ProRes/DNxHD workflows. Thus, little to no time will be required to adapt existing workflows to the XR Capture Drives.

As with SxS PRO cards, an XR Capture Drive containing ProRes 2K/HD or DNxHD clips can be accessed directly, without the need for (but also without the benefits of) the VFS. The file names and directory structure created on the drives or cards are the same for old SxS Module and the new XR Module.

Building your ARRIRAW Deliverables Workflow

Whether you are on a production with a small budget or on a big feature film, recording ARRIRAW to the XR Capture Drives opens up a number of options for managing the camera footage.

A basic, light weight setup, with a MacBook Pro and a Single Dock will get you started on small scale projects. To get the performance and dependability that is needed to endure larger productions, you should replace the MacBook with a Mac Pro and go for the Codex Dual Dock. If you can't bring your rigged DIT Magliner and need to go with a more compact and rugged, yet high-performance setup, you should consider the Codex Vault. On a feature film with different camera units, there could be a combination of a Mac Pro & Dual Dock for studio work and a Vault for location shooting – or multiple Vaults.

Although some consistency in workflows is important, every production is different, so it is difficult to present you with the "one workflow to rule them all". The following pages therefore just show some basic examples of workflow setups that you could put together with the available Codex hardware. This should give you an idea, how the data travels from location to editorial or to the screening room and how the data can be backed up or archived.

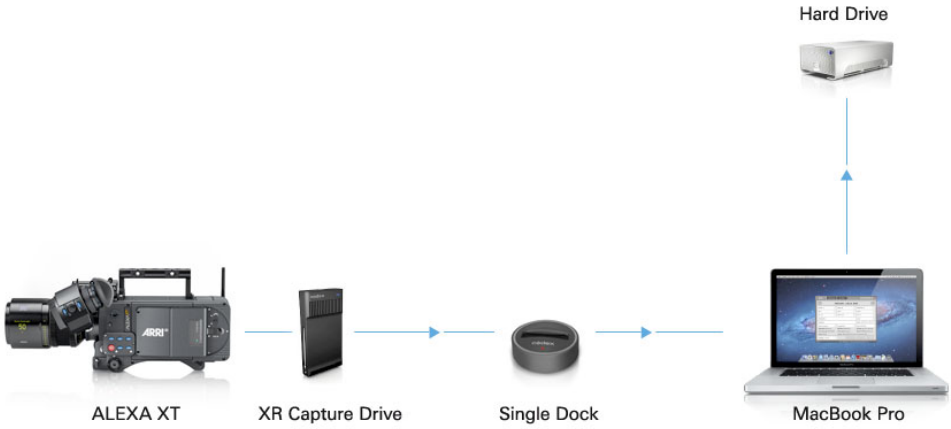
For each example, we also state some speed test results. Please note that these results highlight only one parameter which, by itself, does not represent the overall performance of a particular setup in real life conditions. Obviously, there is a difference between copying one drive in a single test and running the entire set of data management tasks for ten drives on a daily basis. Using the Vault or a setup with a Dual Dock therefore delivers much more than just faster transfer speed. It's also the number of processes that can be run simultaneously, that decides which system outruns the others over a long distance.

[1] The reason for the reduced storage space is that currently, only one SSDs inside the XR Capture Drive is utilized for recording.

Single Dock Setup

The Single Dock USB3 accepts one XR Capture Drive, Codex Capture Drive or Transfer Drive at a time. It connects to a computer via USB 3.0 and comes with the basic version of the Codex Platform software (Mac only). A license for full VFS configuration options is available directly from Codex. The Single Dock USB3 can be ordered from ARRI or Codex.

A MacBook Pro with USB 3.0 and Thunderbolt, a Single Dock and RAID-protected storage could be a light-weight setup for backing up ARRIRAW footage to e.g. a RAID and shuttle disks. With the basic Codex Platform software, the VFS is limited to output .ARI files and Codex shot lists in a fixed file structure. Providing debayered image formats, audio or, for example CDL data requires an upgrade to the full version of the software. We do recommend, however, that deliverables will be created on another machine, as just the backing up of footage will consume a considerable amount of time with this setup.



Available functions:

- Copy Capture Drives to external storage
- Checksum verification
- Generate .ARI files for post production
- Clear the data from the recording media

Optional features:

- Codex full VFS license, to enable VFS configuration
- Codex Offloader option, for verified copies to external drives

Performance Test

We ran speed tests in Mac OS X 10.8.2 on a Retina MacBook Pro 2.3 GHz Intel i7 with 8 GB / 1600 MHz DDR3 RAM. The Mac was connected via USB 3.0 to a Codex Single Dock. The files were written to a 6TB Western Digital My Book Thunderbolt Duo Disk, with a reported write speed of about 230 MB/s (Black Magic Design Disk Speed Test). We timed each transfer using a simple copy command without verification.

- A full XR Capture Drive containing ARRIRAW footage (455 GB) took about 49 minutes to transfer. The .ARI files were generated at approx. 160 MB/s.
- A full XR Capture Drive containing ProRes footage (229 GB) took about 26 minutes to transfer. The QuickTime files was transferred at approx. 150 MB/s.

Important Note

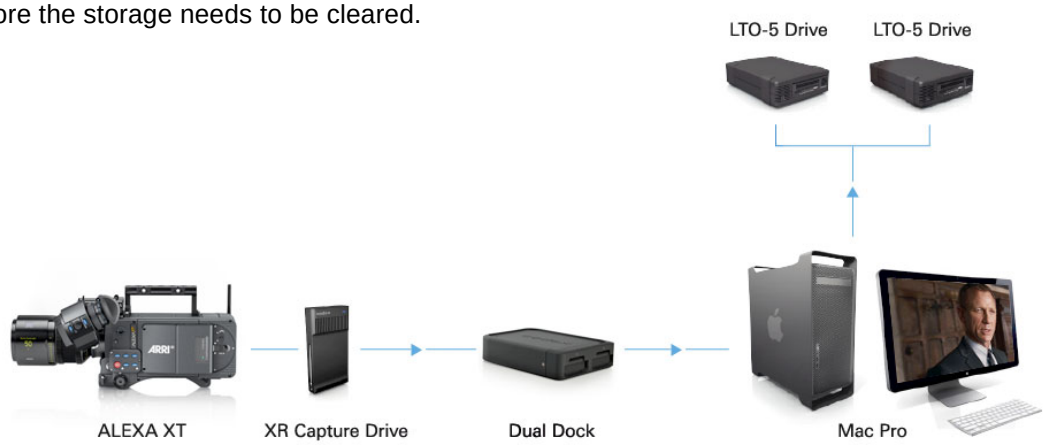
This setup will provide basic access to the ARRIRAW files and may be sufficient for small scale projects with a predictable amount of footage. However, the hardware was not designed for processing large amounts of data. Therefore, we do not recommend using a lightweight setup like this for a deliverables workflow on a longer production that shoots several hours of footage per day.

Dual Dock Setup

The Dual Dock offers two slots for loading XR Capture Drives, Codex Capture Drives or Transfer Drives. The dock needs to be connected to a Mac Pro workstation using Serial Attached SCSI (SAS) for the data channel and USB 2.0 for control. The Dual Dock ships with the basic version of the Codex Platform software. Once hardware and software are installed, you can obtain a free upgrade to the full version of the Codex software. The Dual Dock is available from ARRI or Codex.

A Mac Pro with an internal RAID and a Dual Dock can be used to transfer .ARI files to the internal storage or to clone Capture Drives from one slot to Transfer Drives in the other. Cloning creates a verified, identical copy of a Capture Drive, which maintains the VFS with all options. The VFS can generate deliverables on shuttle disks or, if the Mac is connected to post e.g. via 10 Gig Ethernet, it can act as a file server for direct footage access through a network share. Codex offers a storage option, that allows you to turn the internal RAID of the Mac into a 6TB Codex volume. Capture drives then can be cloned to the internal RAID. If the Mac is used as a file server, this can save disk space, as the VFS can generate all files on-demand. Adding the Codex Offloader option further enables verified copies of the VFS on connected external disks or LTO tapes for archiving.

Depending on the amount of footage per day, the internal RAID storage provides enough space for a few shoot days worth of ARRIRAW footage. This gives a production some buffer to confirm that the material is OK before the storage needs to be cleared.



Available functions:

- Clone Capture Drives to transfer drives, maintaining the VFS
- Checksum verification
- Generate files for review, edit and post
- Clear the data from the recording media

Optional Features:

- Codex Storage option, to keep footage in the VFS
- Codex Offloader option, for verified copies to external drives or LTFS tape

Performance Test

We ran speed tests in Mac OS X 10.6.8 on a Mac Pro 2x 2.26 GHz Quad-Core Intel Xeon with 14 GB / 1066 MHz DDR3 RAM. Mac and Dual Dock were connected with the ATTO Express SAS H680 interface card. The files were written on a SAN over a Fibre Channel connection with a reported write speed of about 360 MB/s (Black Magic Design Disk Speed Test). We timed each transfer using a simple copy command without verification.

- A full XR Capture Drive containing ARRIRAW footage (455 GB) took about 40 minutes to transfer. The .ARI files were generated at approx. 190 MB/s.
- A full XR Capture Drive containing ProRes footage (229 GB) took about 11 minutes to transfer. The QuickTime files was transferred at approx. 360 MB/s.

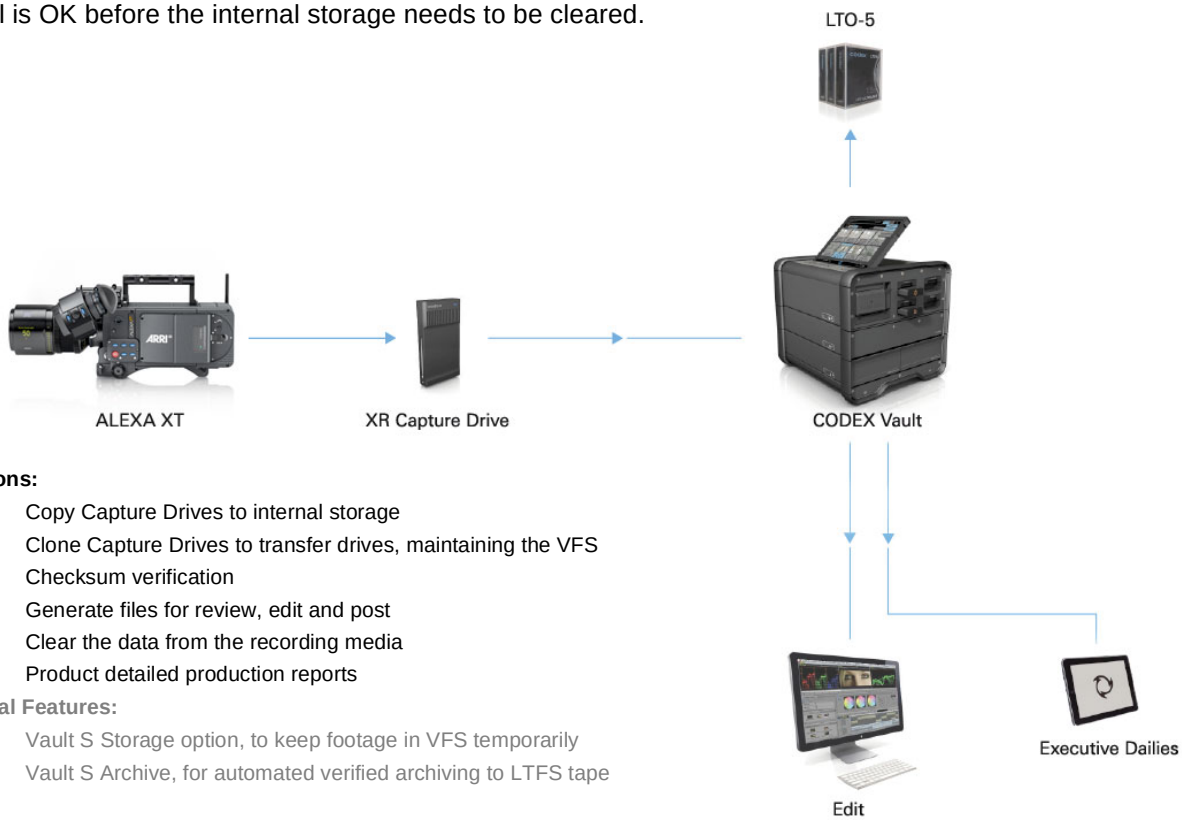
Codex Vault

The Codex Vault is a modular, location-based media management system, which works as a standalone unit with an easy to use touchscreen interface. The base unit, Vault S Process, offers media ports for Codex Capture Drives and Transfer Drives, SxS cards, 1.8" and 2.5" SSD drives and – depending on configuration – other camera media. External drives can be connected via SAS, eSATA and USB 3.0. The Vault is available directly from Codex.

The Vault can be used to clone the contents from a Datapack or Capture Drive to one or more Codex Transfer Drives, or an internal storage. With an optional dual-LTO-5 module, it is also possible to create incremental archives of the camera footage, directly on location.

The Vault an be used to clone Codex Capture Drives to one or more Transfer Drives, or an optional RAID protected internal storage. Cloning creates a verified, identical copy of a Capture Drive and maintains the VFS with all options. The Vault can generate a wide range of deliverable formats and even allows synching audio that was brought in from an external sound recorder. You can expand the Vault with a storage option, to get 7 TB of internal RAID protected storage, and an archive option, to get two LTO5 drives for automated offloading to LTO tape (Linear Tape File System).

The storage option should provide enough space for a few shoot days worth of ARRIRAW footage – of course, depending on the amount of footage per day. This gives a production some buffer to confirm that the material is OK before the internal storage needs to be cleared.



Functions:

- Copy Capture Drives to internal storage
- Clone Capture Drives to transfer drives, maintaining the VFS
- Checksum verification
- Generate files for review, edit and post
- Clear the data from the recording media
- Product detailed production reports

Optional Features:

- Vault S Storage option, to keep footage in VFS temporarily
- Vault S Archive, for automated verified archiving to LTFS tape

Performance Test

We ran a speed test on our Codex Vault, running UI version 2012.r2.2900.
A full XR Capture Drive containing ARRIRAW footage (455 GB) was cloned to the internal storage in 11 minutes. Generating .ARI files on an attached SAS RAID took about 25 minutes.

About the Vault

The Vault is designed to simplify and standardize workflows. It guides the operator through all necessary media management tasks with a simple and intuitive user interface. The configuration of these tasks is done by an expert user (admin), before a Vault is sent off to a production. This admin could be a workflow supervisor, who knows which deliverables will be required, or a rental technician, who has been briefed accordingly.

As an example, the configuration of the Vault's 'Generate task' controls, which file formats will be created, which image dimensions, text overlays (burn-ins), and output color space the files will have, how they will be named, and which directory structure they will be put in.

During production, the operator simply needs to follow the pre-configured, standardized workflow. All complexity that results from the versatility of file-based workflows is taken off his/her mind by the expert user's configuration. Once a Vault is prepped, it therefore can be operated by anyone who is thorough about his/her work. Unless the operator is handed administrative access, it is not possible to deviate from the pre-defined workflow. This makes the entire process very safe, which typically contains the following steps:

- Unload a Capture Drive from the camera and replace it with an empty drive.
- Take the camera footage to the Vault and run all media management tasks.
- Start over.
- Archive the day's footage, e.g. to LTO tape.
- Create a daily report sheet.
- Wait for OK from post production before clearing footage from the internal storage.

This is probably as close as we can get back to the original job of the 2nd AC or clapper loader.

Accessing UDF Volumes (XR Capture Drives and SxS PRO cards)

XR Capture Drives or SxS PRO cards containing ProRes or DNxHD footage are formatted using the UDF file system. They can be accessed without going through the Codex Platform software and VFS, using e.g. the Single Dock (for XR Capture Drives) or standard ExpressCard/34 card readers (for SxS PRO cards) such as the Sonnet Qio E3 eSATA reader, the Sonnet Echo Pro ExpressCard/34 Thunderbolt adapter, or a built-in ExpressCard/34 reader. These readers can be found in several PC notebooks and some of the older 15 and 17 inch MacBook Pro models.

QuickTime/ProRes or MXF/DNxHD clips therefore are accessible directly from a Windows machine, a Linux machine or a Mac whereas ARRIRAW files need to be accessed through the Codex VFS, which is only available on a Mac.

Scaling your Workflow

To overcome a situation where you will be faced with more footage than a setup can handle, the obvious solution is to add a second setup. Sometimes, it may be more beneficial to combine setups including a Single Dock and a Dual Dock or a Dual Dock and a Vault, and to use the different feature-sets to distribute the workload.

Sometimes (not even related to the amount of footage) higher efficiency may be gained by splitting tasks between location and post production. One example would be creating multiple deliverables for editorial, dailies projection, streaming on the web, iPad, etc., which can be done more efficiently using a dedicated dailies tool. Archiving to LTO tape also does not necessarily need to happen on location, especially if postproduction is close by and possibly connected over e.g. 10 Gig Ethernet.

More Information

For more information about the ARRI ALEXA, please visit http://www.arri.com/alexa.

For more information about Codex products and workflows, please visit http://www.codexdigital.com.

If you have comments or questions about this document, please send us an email to digitalworkflow@arri.de.

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